National Weather Service
Service Description Document (SDD)
Experimental Product
March 2014
Southern Region River Forecast Center Decision Support Interface

Part 1 - Mission Connection

1. Service Description:

In 2009, Southern Region formed a team to investigate potential decision support activities in the Southern Region Hydrology Program. One of the ideas that stemmed from the Southern Region Hydrology Decision Support Team was the concept of an RFC Decision Support Map. The conceptual Decision Support Map would consist of a Google Earth map with a variety of existing RFC products available as overlays on this map. The map would provide the user with the flexibility to create a customized map focusing on information they need to make decisions. The user would be able to set the map scale, and would not be confined to the current RFC map scale used on the RFC web pages. The ability to expand the map domain beyond a single RFC service area, has been a widely requested functionality from customers serviced by multiple RFCs. This requirement is also documented in recent flood-related Service Assessments. Since the RFC Decision Support Map would provide a mechanism to visualize a variety of RFC products, this map could replace the current status map found on NWS Southern Region RFC webpages.

This experimental service was implemented at the West Gulf River Forecast Center (WGRFC) and Arkansas-Red Basin River Forecast Center (ABRFC) during the initial experimental service cycle. The following offices now have this implemented also on their websites: Lower Mississippi River Forecast Center (LMRFC) and Southeast River Forecast Center (SERFC).

2. Purpose/Intended Use:

The mapping interface (Figure 1) brings together into one interface, several data sets from across the NWS and other agencies. The ability to overlay and compare this multitude of data sets all in one interface, saves decision makers time formerly spent digesting that same data via several different web sources, and many times would otherwise make meaningful spatial comparisons nearly impossible.

Internally within the NWS, this tool has the capability of being used as an effective briefing tool to communicate hydrologic issues to NWS customers. As such, the interface has the ability to save time within the office formerly spent gathering information included in this interface from many sources and compiling them into a format they can use to brief partners (like a slideshow).

3. Audience:

Core NWS Partners in government and the private sector and water resource and emergency managers at all governmental levels will benefit from using the mapping interface in the decision making process. The mapping interface will also provide a powerful information service for the general public.

4. Presentation Format:

The mapping interface allows the user the flexibility to “pan and zoom” to highlight areas of interest in more detail. “Layers” can be added or removed from the map for user comparison of weather, hydrologic layers, and geographical orientation to political, institutional, and geographic boundaries. The data layers are turned on and off via a series of checkboxes and radio buttons embedded in a collapsible “accordion” style menu to the right of the mapping interface.

5. Feedback Method:

Technical questions may be addressed via e-mail to: sr-FWR.dsstool@noaa.gov

Users can also provide feedback with this survey:
http://www.nws.noaa.gov/survey/nws-survey.php?code=RFCDSM

or directly to this e-mail address: sr-FWR.dsstool@noaa.gov

The comment period has been extended for nine months from April 1, 2014, to April 1, 2015.

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Part 2 – Technical

1. Format and Science Basis:

The mapping interface consists of a dynamic mapping API (Google Maps) that allows the user flexibility inherent in that environment including the ability to set “pan and zoom” to highlight areas of interest in more detail.

Available data layers include, but are not limited to: weather forecast and observational data, hydrologically-influenced observational and forecast data, and geographical/political boundaries that serve as reference points for customers and NWS personnel. The data layers are turned on and off via a series of checkboxes and radio buttons embedded in a collapsible “accordion” style menu to the right of the mapping interface.

The layers are provided to the interface via two primary methods: web mapping services (WMS) and keyhole markup language (KML). The source data for the layers is made available for download to customers in either ESRI Shapefile format or KML format.

For the extension period of this experimental service, the following services have been added, for which feedback will be collected.

- RFC Mosaic of Quantitative Precipitation Forecasts
- RFC Mosaic of Gridded Flash Flood Guidance
- Additional Precipitation Datasets
- Additional Tool Functionality Based Off Initial Customer Feedback

2. Availability:

This service will be available 24 hours/day, seven days a week by visiting one of the following websites:

http://www.srh.noaa.gov/wgrfc/

http://www.srh.noaa.gov/serfc/

http://www.srh.noaa.gov/abrfc/

http://www.srh.noaa.gov/lmrfc/

As some of the data overlays depend upon experimental/developmental hardware, some of the overlays may not be available 24x7 if a failure should occur. Even in that case, the core functionality - which includes river status, and forecast information, would still be available.

3. Additional Information:

Figure 1 : Example of the Southern Region River Forecast Center Decision Support Interface from the WGRFC website

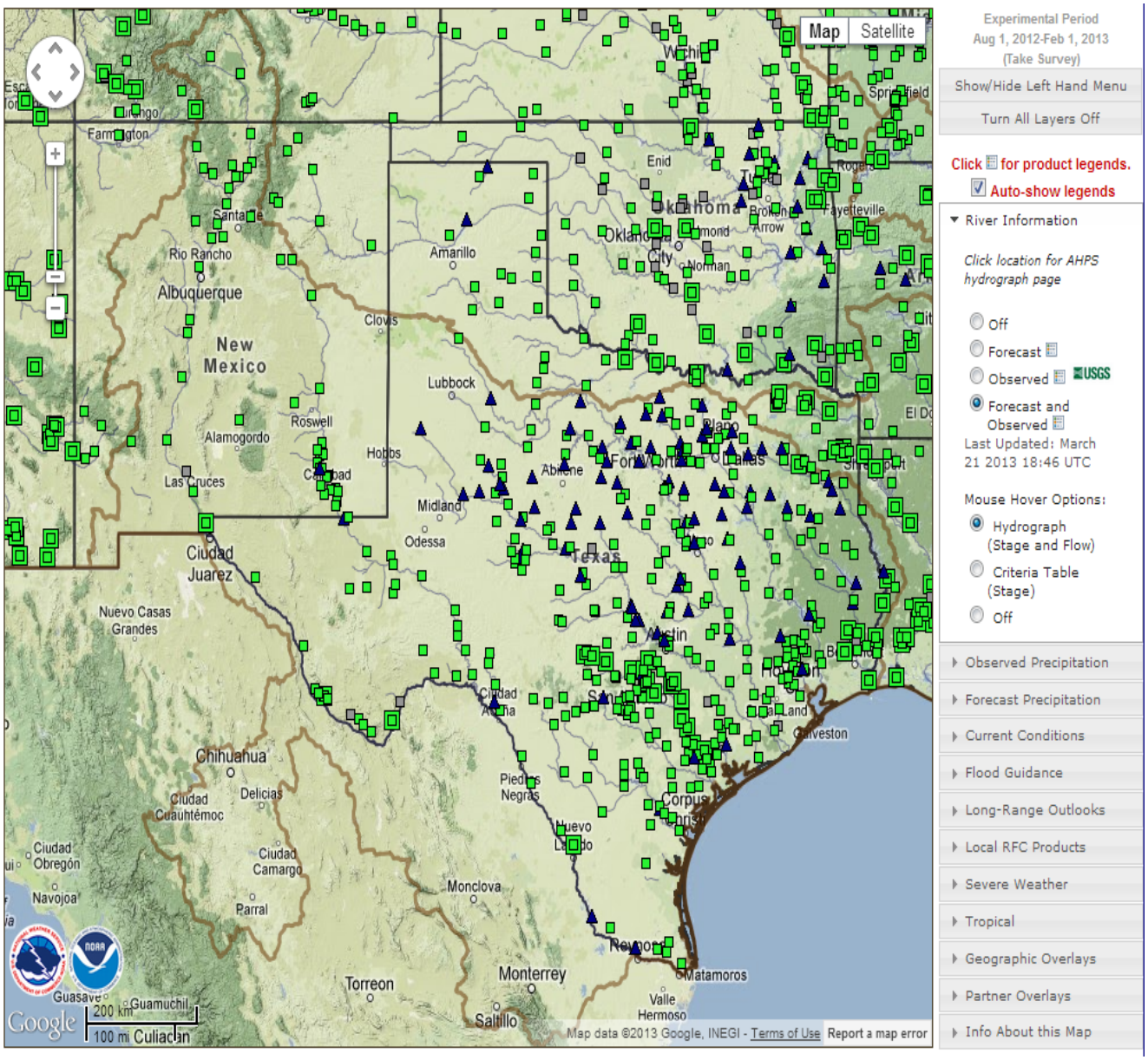

Figure 2 : Example of the Southern Region River Forecast Center Decision Support Interface from the ABRFC website